

THE INVENTION CLAIMED IS:

1 1. A method of transmitting a stream of data,
2 comprising:
3 (a) dividing the stream of data into a first
4 substream and a second substream;
5 (b) transmitting the first substream in a first
6 data channel;
7 (c) transmitting the second substream in a second
8 data channel; and
9 (d) prior to step (b), inserting a first marker
10 signal in the first substream.

1 2. The method of claim 1, further comprising
2 receiving the first substream and detecting the first marker
3 signal therein to identify the first substream.

1 3. The method of claim 2, further comprising
2 reassembling the stream of data from the first and second
3 substreams on the basis of the detected first marker signal.

1 4. The method of claim 2, further comprising:
2 prior to step (c), inserting a second marker
3 signal in the second substream.

1 5. The method of claim 4, further comprising
2 receiving the second substream and detecting the second
3 marker signal therein to identify the second substream.

1 6. The method of claim 1, further comprising:
2 prior to step (c), inserting a second marker
3 signal in the second substream.

1 7. The method of claim 6, wherein the first and
2 second marker signals are respective comma-sync characters.

1 8. The method of claim 1, wherein the first
2 marker signal is selected from the group consisting of
3 comma-sync even characters and comma-sync odd characters.

1 9. The method of claim 1, wherein the first
2 substream includes first half-words of each word of the
3 stream of data and the second substream includes second
4 half-words of each word of the stream of data.

1 10. The method of claim 1, wherein the first data
2 channel includes a first optical fiber and the second data
3 channel includes a second optical fiber.

1 11. The method of claim 1, wherein the stream of
2 data is encoded in accordance with an 8b/10b code.

1 12. A method of transmitting a stream of data,
2 comprising:
3 dividing the stream of data into a plurality of
4 substreams;
5 transmitting the substreams in respective data
6 channels; and

7 prior to the transmitting step, inserting a
8 respective marker signal in at least n minus one of the
9 substreams, wherein n equals the number of substreams.

1 13. The method of claim 12, wherein the inserting
2 step includes inserting a respective marker signal in each
3 of the substreams.

1 14. The method of claim 12, further comprising
2 receiving the transmitted substreams and detecting a marker
3 signal in at least n minus one of the received substreams to
4 identify at least n minus one of the received substreams.

1 15. The method of claim 14, further comprising
2 reassembling the stream of data from the received substreams
3 on the basis of the detected marker signals.

1 16. The method of claim 12, wherein each of the
2 data channels includes a respective optical fiber.

1 17. A data communication apparatus, comprising:
2 a transmitter;
3 a receiver;
4 a first data channel connecting the receiver to
5 the transmitter; and
6 a second data channel connecting the receiver to
7 the transmitter;

8 wherein the transmitter operates to:
9 divide a stream of data into a first

10 substream and a second substream;
11 insert a first marker signal in the first
12 substream;
13 transmit the first substream to the receiver
14 via the first data channel, the transmitted first
15 substream including the inserted first marker
16 signal; and
17 transmit the second substream to the receiver
18 via the second data channel.

1 18. The data communication apparatus of claim 17,
2 wherein the transmitter further operates to insert a second
3 marker signal in the second substream.

1 19. The data communication apparatus of claim 18,
2 wherein the receiver operates to detect the first and second
3 marker signals in the first and second substreams to
4 identify the first and second substreams.

1 20. The data communication apparatus of claim 17,
2 wherein the receiver operates to detect the first marker
3 signal in the first substream to identify the first
4 substream.

1 21. The data communication apparatus of claim 20,
2 wherein the receiver operates to reassemble the stream of
3 data from the first and second data streams on the basis of
4 the detected first marker signal.

1 22. The data communication apparatus of claim 17,
2 wherein the first data channel includes a first optical
3 fiber and the second data channel includes a second optical
4 fiber.

1 23. A data communication apparatus, comprising:
2 a transmitter;
3 a receiver; and
4 a plurality of data channels connecting the
5 receiver to the transmitter;
6 wherein the transmitter operates to:
7 divide a stream of data into a plurality of
8 substreams;
9 insert a respective marker signal in at least
10 n minus one of the substreams, wherein n equals
11 the number of substreams; and
12 transmit each of the substreams in a
13 respective one of the data channels.

1 24. The data communication apparatus of claim 23,
2 wherein the receiver operates to receive the transmitted
3 substreams and to detect a marker signal in at least n minus
4 one of the received substreams.

1 25. The data communication apparatus of claim 24,
2 wherein the receiver further operates to reassemble the
3 stream of data from the received substreams on the basis of
4 the detected marker signals.

1 26. The data communication apparatus of claim 23,
2 wherein the transmitter inserts a respective marker signal
3 in each of the substreams.

1 27. The data communication apparatus of claim 23,
2 wherein each of the plurality of data channels includes a
3 respective optical fiber.

1 28. A method of transmitting a stream of data,
2 comprising:

3 dividing the stream of data into a plurality of
4 substreams, a first of the substreams including first half-
5 words of each word of the stream of data and a second of the
6 substreams including second half-words of each word of the
7 stream of data;

8 transmitting the substreams in respective fiber
9 optic data channels;

10 prior to the transmitting step, inserting a
11 respective marker signal in at least n minus one of the
12 substreams, wherein n equals the number of substreams;

13 receiving the transmitted substreams and detecting
14 a marker signal in at least n minus one of the received
15 substreams to identify at least n minus one of the received
16 substreams; and

17 reassembling the stream of data from the received
18 substreams on the basis of the detected marker signals.

1 29. A data communication apparatus, comprising:
2 a transmitter;

3 a receiver; and
4 a plurality of fiber optic data channels
5 connecting the receiver to the transmitter;
6 wherein the transmitter operates to:
7 divide a stream of data into a plurality of
8 substreams, a first of the substreams including first half-
9 words of each word of the stream of data and a second of the
10 substreams including second half-words of each word of the
11 stream of data;
12 insert a respective marker signal in at least
13 n minus one of the substreams, wherein n equals the number
14 of substreams; and
15 transmit each of the substreams in a
16 respective one of the data channels; and
17 wherein the receiver operates to:
18 receive the transmitted substreams and to
19 detect a marker signal in at least n minus one of the
20 received substreams; and
21 reassemble the stream of data from the
22 received substreams on the basis of the detected marker
23 signals.